

REMARKS/ARGUMENTS

Prior to this Amendment, claims 1-23 claims were pending in the application. A restriction requirement has been applied to the claims, and Applicant has elected to prosecute the species disclosed in Figure 3 and claims that read on this species.

Claim 1 is amended to include the allowable subject matter from dependent claim 9, and claims 3-5 and 7-9 are cancelled with their limitations being added to claim 1.

Independent claim 10 is amended to include the allowable subject matter from dependent claim 14, and dependent claims 12-14 are cancelled.

Independent claim 16 is amended to include the allowable subject matter from dependent claim 21. Claims 17-21 are cancelled.

Independent claim 22 is amended to clarify that the high pass filter is serially connected between the input gain device and the output buffer device to provide a filtered output to the buffer device.

New claims 24-27 are added to protect features of the invention not shown by the prior art including the dynamic control of the high pass filter both on an ongoing basis and in the amount of filtering performed. Support is found at least in paragraphs [0027], [0030], and [0031].

After entry of the Amendment, claims 1, 2, 6, 10, 11, 15, 16, and 22-27 remain for consideration by the Examiner.

Allowable Subject Matter

In the October 3, 2006 Office Action, claims 9, 14, and 21 were objected to as being dependent upon a rejected base claim, but each of these claims was found to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In response, claim 9 is rewritten in independent form by amending its base claim, i.e., claim 1, to include the limitations of claim 9 and intervening claims 3-5, 7

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and 8. Claim 1 and claims 2 and 6, which depend from claim 1, are now believed to be in condition for allowance.

Claim 14 is rewritten in independent form by amending independent claim 10 to include its limitations as well as those of intervening claims 12 and 13. As a result, claim 10 and claims 11 and 15, which depend from claim 10, are believed in condition for allowance.

Claim 21 is rewritten in independent form by amending independent claim 16 to include the limitations of claim 21 along with intervening claims 17-20. Claim 16 is now believed in condition for allowance.

Claim Rejections Under 35 U.S.C. §102

In the October 3, 2006 Office Action, claims 1-6, 10-12, and 15-19 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. RE 37,751 ("Sutardja"). This rejection is traversed based on the following remarks.

Independent claim 1 is amended to include the limitations of allowable dependent claim 9, and hence, claim 1 is believed allowable over Sutardja. Claims 2 and 6 depend from claim 1 and are believed allowable over Sutardja at least for the reasons for allowing claim 1. Claims 3-5 are cancelled.

Independent claim 10 is amended to include the limitations of allowable dependent claim 14. As a result, claim 10 and claims 11 and 15, which depend from claim 10, are believed allowable over the teaching of Sutardja.

Independent claim 16 is amended to include the limitations of allowable dependent claim 21, and hence, claim 16 is believed allowable over Sutardja.

Claim Rejections Under 35 U.S.C. §103

Further, in the October 3, 2006 Office Action, claims 7, 8, 13, 20, 22, and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Sutardja in view of U.S. Pat. No. 6,735,260 ("Eliezer"). Claims 7, 8, 13, and 20 are cancelled. The rejection of claims 22 and 23 is traversed based on the following remarks.

Independent claim 22 is directed to a preamplifier for correcting thermal asperity transients in output signals of a MR read head. The preamplifier includes an input gain device and an output buffer device that outputs a signal to a read channel. A high pass filter is "connected in series between the input gain device and the output buffer device" that functions to filter "an output of the input gain device based on an input voltage control signal" and provide a filtered signal to the output buffer device. A filter controller detects peaks and uses "a non-linear function generator generating the voltage control signal based on an output of the low pass filter." The combined teaching of the two cited references fails to teach or suggest at least the connection and functioning of the high pass filter as called for in claim 22, and it is requested that the rejection be withdrawn and claim 22 allowed.

Specifically, the Office Action cites Sutardja as teaching an input gain device with its analog front-end 102 or 103 and an output buffer with its data detector 108. The high pass filter of claim 22 is said to be shown with filter 210 and the filter controller is said to be shown by transient detector 204 both shown in Figure 4 of Sutardja. Reviewing Figure 4 and related text of Sutardja, it can be seen that the "bypassable high-pass" filter 210 is not "connected in series between the input gain device and the output buffer device" such that it provides a filtered output signal to the output buffer device. Instead, the bypassable high-pass filter is connected such that it takes input from the analog front-end 102 (after it passes through components 104, 106) but then provides its output to the timing control 110 and gain control 114 to effect operations of front-end 102 or 103, sampler 104, and FIR 106. This results in a differing functionality and allows the filter 210 to be bypassed or turned on and off whereas, in contrast, the preamplifier of claim 22 always operates with the input gain device output being filtered by the high pass filter. Hence, Sutardja fails to show the high pass filter limitations of claim 22. Eliezer is

not cited for overcoming this deficiency. Claim 22 is, therefore, believed in condition for allowance over the two references.

Further, claim 22 calls for the high pass filter to filter "based on an input voltage control signal" that is provided by a "non-linear function generator" based on an output of the low pass filter. Sutardja teaches the high-pass filter 210 is turned on when the transient detector 204 detects transients but not that the filtering is performed based on a control signal or, specifically, not based on a control voltage produced by a non-linear function generator. The Office Action acknowledges this deficiency of Sutardja. However, the Office Action argues that Eliezer teaches the use of such a non-linear function generator to create a control signal at col. 8, line 65 through col. 9, line 11. However, Eliezer teaches generating "discharge control signals" and does not teach generating high pass filter control signals. As noted above, Sutardja merely teaches providing an on/off signal to control its high pass filter, and, therefore, the motivation to modify Sutardja must be found in Eliezer and not in Applicant's specification. Eliezer in col. 9, lines 12-49, however, explains that its discharge control signals are used to control the discharge rate of the peak holding capacitors. There is no discussion in Sutardja or Eliezer of a dynamic, voltage-controlled high pass filter as called for in claim 22, e.g., one that filters based on a voltage control signal that is created by a non-linear function generator in a filter controller. Therefore, there is no motivation to combine the two references found in either reference (or in the knowledge of one skilled in the art) and, if combined, the claimed invention would not be achieved because the control signals of Eliezer would likely be used to control output or discharge rates (which would likely ruin synchronization) and not to dynamically control the high pass filter and the amount of filtering it performs. For these additional reasons, claim 22 is believed in condition for allowance.

Claim 23 depends from claim 22 and is believed allowable at least for the reasons provided for allowing claim 22.

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Conclusions

In view of the above, it is requested that a timely Notice of Allowance be issued in this case.

A fee is provided for the addition of an independent claim. No other fee is believed due with this submittal. However, any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

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